

CLAIMS

What is claimed is:

5        1. A system for forming a pivot, comprising:  
                a first member;  
  
                a second member; and  
  
10        a pivot structure having a head, a body connected  
                to the head, a stop and a lip, the body  
                extending through the first member and the  
                second member, the first member having a  
                plastically deformed region receiving the  
15        head, the lip being deformed generally  
                towards the stop to prevent separation of the  
                second member from the first member during  
                relative pivotal motion between the first and  
                the second member.  
  
20        2. The system as recited in claim 1, wherein the body  
                has a generally circular cross-section.

3. The system as recited in claim 2, wherein the lip encircles the stop.

5 4. The system as recited in claim 1, wherein the body comprises a relief cut proximate the head to receive material from the first member during formation of the plastically deformed region.

10 5. The system as recited in claim 2, wherein the head has a plurality of flat sides.

6. The system as recited in claim 5, wherein the flat sides are arranged in a hexagon.

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7. The system as recited in claim 1, wherein the first member is formed from a metal sheet material.

20 8. The system as recited in claim 7, wherein the metal sheet material is a portion of a computer chassis.

9. A method of creating a pivot, comprising:

placing a pivot structure with a head, a body, a stop and a retention feature proximate a first member;

5 moving the body through the first member until the head plastically deforms the first member;

pivotably mounting a second member to a portion of the body extending through the first member;

10 and

deforming the retention feature with a tool until the tool strikes the stop.

15 10. The method as recited in claim 9, wherein moving comprises moving the body through an opening formed in the first member.

20 11. The method as recited in claim 9, wherein deforming comprises bending the retention feature.

12. The method as recited in claim 9, wherein deforming comprises bending a generally circular retention feature surrounding the stop.

5       13. The method as recited in claim 9, further comprising selecting a gap between the head and the deformed retention feature by selecting a desired distance between the head and the stop.

10       14. The method as recited in claim 9, wherein moving comprises moving the body through a sheet metal portion of the first member.

15       15. The method as recited in claim 14, further comprising forming a hole through the sheet metal portion sufficiently large to permit unobstructed passage of the body while obstructing passage of the head.

16. A device that may be secured to a first member  
20 through plastic deformation of the first member and to which a second member may be mounted for relative pivotal motion between the first member and the second member, comprising:

a body;

a head disposed at one end of the body;

5           a deformable retention member disposed at a  
generally opposite end of the body from the  
head; and

10           a stop positioned a predetermined distance from  
the head to permit control of the deformation  
of the deformable retention member.

17. The device as recited in claim 16, wherein the  
deformable retention member comprises a generally circular  
15       lip.

18. The device as recited in claim 17, wherein the  
stop is disposed within the generally circular lip.

20           19. The device as recited in claim 18, wherein the  
head comprises a plurality of flat sides to better secure  
the head to the first member during plastic deformation of  
the first member.

20. The device as recited in claim 19, wherein the body comprises a relief region proximate the head.